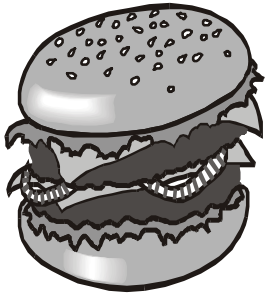


What Is *E. coli*?

E. coli is a group of related bacteria that naturally lives in the intestines of humans and animals. There are hundreds of strains of *E. coli* and most are harmless. Some strains though, including *E. coli* O157:H7, can cause illness.

E. coli O157:H7 was first recognized as causing illness during an outbreak of severe bloody diarrhea in 1982. The outbreak was traced to contaminated hamburgers. Ground beef is often implicated because of several factors—including how it is processed (grinding incorporates the *E. coli* throughout the meat) and how it is prepared (undercooked hamburger allows *E. coli* to survive).

Although *E. coli* O157:H7 cases occur year-round, illnesses peak between July and September. These summer cases are often linked to home barbecues and picnics where ground beef is improperly stored, handled or served undercooked.



Symptoms

E. coli O157:H7 can cause a gastrointestinal infection.

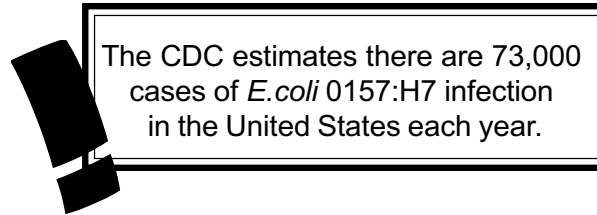
After an incubation period of generally between 2-4 days, symptoms can include:

- intense abdominal pain and cramps,
- mild or no fever,
- diarrhea,
- bloody diarrhea on about day 4,
- vomiting and nausea.

In some people, especially children under 5 years old and the elderly, the infection can also cause hemolytic uremic syndrome (HUS). In HUS, the red blood cells are destroyed and the kidneys fail.

Complications may also occur in people with deficient immune systems (for example, people with AIDS or people on immuno-suppressive therapy).

Incubation period--The period from the time of infection until the first symptom is noticed.



Treatment

The infection is confirmed with a stool sample. Most people recover within 5-10 days even without antibiotics or other specific treatment. There is no evidence that antibiotics reduce the severity of the disease, and it is possible that treatment with some antibiotics may cause kidney complications.

There is no known cure for the disease, but it is important to contact your doctor if you think you or your children have this illness. Health care providers can treat the symptoms of the infection and will notify the public health department to try to find the source and limit the spread of the *E. coli*.

As with all types of diarrhea, it is important to avoid dehydration by drinking plenty of fluids. Unless recommended by a doctor or other health professional, anti-diarrheal agents should not be used.

Transmission

***E. coli* O157:H7 can be spread many ways.**

- *E. coli* O157:H7 can live in the intestines and waste of healthy cattle and other animals. **Contamination may occur during slaughter.** (Contaminated meat looks and smells normal.) The bacteria are killed when meat is thoroughly cooked, but may survive in meat that is not adequately cooked.
- Foods can become contaminated with *E. coli* O157:H7 through **contact with raw meat** (cross-contamination).
- The bacteria may be present in milk. **Drinking unpasteurized milk** or eating products made from unpasteurized milk may also cause illness.
- The **bacteria may be on fallen apples** (or other produce found on the ground) and are introduced into juices during processing. The bacteria are killed during pasteurization, but may survive in products that are unpasteurized.
- **Swimming in, or drinking, sewage-contaminated waters** has caused illness.
- **Sprouts may also be contaminated.** It is recommended that people at risk for foodborne illnesses (including pregnant women) not eat raw sprouts.
- **Secondary infection** is also possible. The bacteria in the feces of infected people can be passed to others if handwashing is inadequate.
- **Inadequate handwashing** at petting zoos has also spread illness. *E. coli* (and other disease-causing bacteria) can be present on animals, as well as their bedding, food, water, and barricades.

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Prevention

Always wash your hands before handling food, after using the restroom or changing diapers, after handling raw meat, and after petting animals.

Thoroughly cook all food items containing ground beef. Because hamburger can turn brown before disease-causing bacteria are killed, use a thermometer to make sure the temperature (in several parts of the hamburger) reaches at least 155° F.

If you are served an undercooked hamburger or other ground beef product in a restaurant, send it back for additional cooking. You may want to ask for a new bun and a clean plate, too.

Avoid spreading harmful bacteria in your kitchen. Keep raw meat away from other foods and wash hands, counters, and utensils with hot soapy water after they touch raw meat.

Refrigerate raw meat so that it doesn't drip blood or juices onto other foods. We recommend storing raw meat on the bottom shelf in a covered plastic or glass dish.

Never place cooked hamburgers or ground beef on the unwashed plate that held raw patties.

More Prevention Tips

- ❗ Drink only pasteurized milk, juice, or cider.
- ❗ Drink municipal water that has been treated with chlorine or other effective disinfectants.
- ❗ Wash all fruits and vegetables in running water before eating. Keep sliced melons cold.
- ❗ While shopping, select meats last, and put them in water-tight bags.
- ❗ After shopping, quickly freeze or refrigerate all perishable food items.
- ❗ Do not work with food (or swim in a public pool or lake) if you are vomiting or have diarrhea.
- ❗ Avoid swallowing lake, river or pool water while swimming.
- ❗ Keep your child at home if your child is feeling ill. School and child care is for healthy children.
- ❗ Teach your children proper handwashing:
 - ✋ Wet hands with warm water;
 - ✋ Use liquid or powdered soap;
 - ✋ Scrub hands for at least 20 seconds;
 - ✋ Rinse hands with warm running water;
 - ✋ Dry hands with a paper towel;
 - ✋ Turn the faucet off with a paper towel.



For More Information



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Also read our brochure, "BBQ Food Safety"

E. coli

O157:H7

facts about germs series



www.bfhd.wa.gov

